



HOKKAIDO UNIVERSITY

Title	TWO NEW SPECIES OF THE GENUS SCIRPOPHAGA FROM NEPAL (LEPIDOPTERA : PYRALIDAE : SCHOENOBIINAE)
Author(s)	Lewvanich, Angoon
Citation	Insecta matsumurana. Series entomology. New series, 24: 17-27
Issue Date	1981-07
Doc URL	http://hdl.handle.net/2115/9815
Right	
Type	bulletin
Additional Information	



Instructions for use

**TWO NEW SPECIES OF THE GENUS SCIRPOPHAGA
FROM NEPAL
(LEPIDOPTERA: PYRALIDAE: SCHOENOBIIINAE)**

Scientific Results of Hokkaidô University Expeditions
to the Himalaya, Entomology No. 40

By ANGOON LEWVANICH

Abstract

LEWVANICH, A. 1981. Two new species of the genus *Scirpophaga* from Nepal (Lepidoptera: Pyralidae: Schoenobiinae). *Ins. matsum. n.s.* 24: 17-27, 8 figs. (4 text-figs., 2 pls.).

Two new species of the genus *Scirpophaga*, *S. kumatai* and *S. nepalensis*, are described from Terai Forest, Nepal. The main characters of both external and genitalic structures are given. The similarities to the other related species are discussed.

Author's address. Entomology and Zoology Division, Department of Agriculture, Bangkhen, Bangkok 9, Thailand.

Contents

Acknowledgements	19
Introduction	19
<i>Scirpophaga kumatai</i> , sp. n.	19
<i>Scirpophaga nepalensis</i> , sp. n.	21
Plates	24

ACKNOWLEDGEMENTS

I am deeply grateful to Dr. K. Yasumatsu, Professor Emeritus of Kyûshû University, Japan, and a Colombo Plan Expert in the Department of Agriculture, Ministry of Agriculture and Co-operative, Thai Government, for his effort in making this study possible and for his enthusiastic interest and encouragement throughout.

This study was carried out in the Entomological Institute, Hokkaidô University, Japan. I wish to express my sincere thanks to Dr. T. Nakashima, former Professor of Entomology, for his permission to study the material and to use the facilities provided at the Institute; to Dr. T. Kumata for his valuable suggestions and criticism; to Drs. S. Takagi and M. Suwa for their kind help in various ways. The help and hospitalities from the other staff members of Hokkaidô University are also acknowledged with thanks.

I am also thankful to Dr. Tanongchit Wongsiri, Director of Entomology and Zoology Division, and Mrs. Nualsri Wongsiri of the Taxonomy Section, Entomology and Zoology Division, Department of Agriculture, Thailand, for their constant encouragement during the time of this study.

Finally, I wish to extend my sincere gratitude to the authorities of the 'Japan Society for the Promotion of Science', who provided me with a grant for this study.

INTRODUCTION

In doing a revisional study on some stem borer moths of South and East Asia, the author could get the fund from the 'Japan Society for the Promotion of Science' to go to Japan for 6 months through the kind arrangement of Dr. K. Yasumatsu, Professor Emeritus of Kyûshû University, Japan, and a Colombo Plan Expert in the Department of Agriculture, Thailand. The cooperative research facility was the Entomological Institute, Hokkaidô University. To study thoroughly of the stem borers, many of the entomological museums in Japan were visited. The museums contain not only Japanese material but also collections from many countries in Asia.

I concentrated, among the stem borer moths, on two great economic important genera, *Scirpophaga* and *Chilo*, which are mainly serious pests of gramineous crops, including rice and sugar-cane. During the study, two new species in the genus *Scirpophaga* are recognized. They are found from the material collected by the Hokkaidô University Expedition to Nepal in 1968. In this paper these two new species are described.

This paper is a part of the revisional study on some stem borer moths of South and East Asia, which will be published later.

Scirpophaga kumatai, sp. n.

Holotype ♂. Expanse of wings: 21.0 mm (of the type series 16.5–21.0 mm). Ochreous white. Labial palpus ochreous white, underside ochreous yellow; length of labial palpus approximately 4 times diameter of compound eye. Forewing ochreous white, shading to ochreous yellow along termen, costa ochreous, one dark fuscous spot at lower angle of cell (this spot sometimes absent in the other specimens), R_1 anastomosed with Sc; underside fuscous. Hindwing ochreous

white, termen ochreous yellow; underside suffused with ochreous yellow. Frenulum single-bristled.

♀. Expanse of wings: 21.0–21.5 mm. Pale ochreous white. Labial palpus pale ochreous white, underside ochreous yellow; length of labial palpus approximately 4.5 times diameter of compound eye. Forewing ochreous white with dark fuscous spot at lower angle of cell; underside ochreous yellow. Hindwing ochreous white on both surfaces. Frenulum single-bristled. Anal tuft ochreous yellow.

Genitalia: Holotype ♂. Uncus and gnathos slender. Gnathos arms converging gradually. Tegumen with sclerotized thickening somewhat x-shaped. Subteguminal process round, plate-like. Valva truncate. Manica with two groups of strong spines. Aedeagus slender, vesica lined with coarse spines.

♀. Ostium bursae broad, slightly wrinkled, lined internally with minute spines. Ductus bursae without antrum, anterior half membranous, and strongly wrinkled; posterior half connected to ostium bursae, lined with sclerotized plates. Ductus seminalis arising at middle of ductus bursae. Corpus bursae rounded, lined internally with minute spines.

Material examined: 12 ♂ & 4 ♀. Holotype ♂: Nepal, Adhabar, Terai Forest, 300 m., 27. vi. 1968, T. Kumata leg., genitalia slide No. Sch-30. Paratypes: 1 ♀,

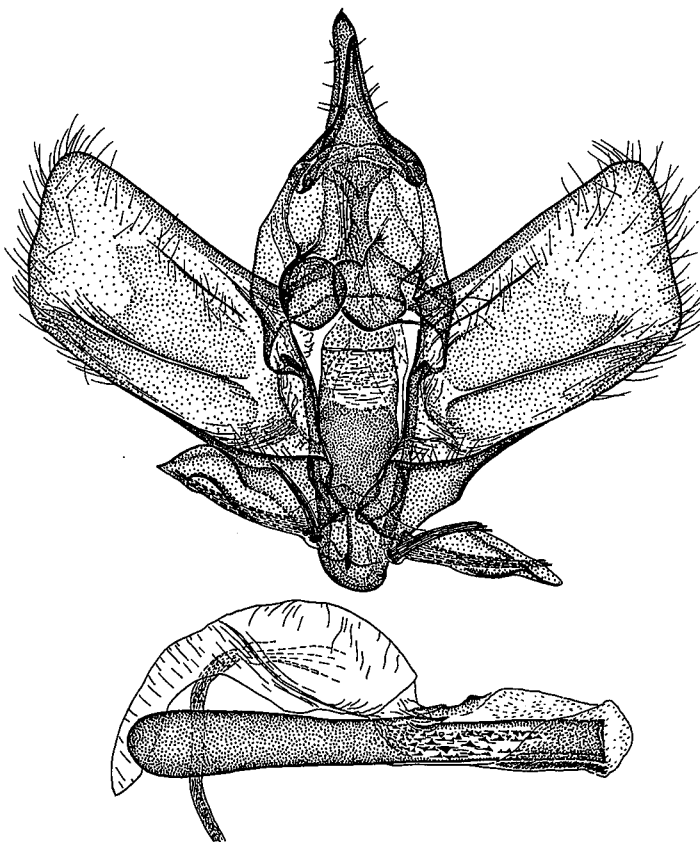


Fig. 1. *Scirpophaga kumatai*, sp. nov., ♂ genitalia.

same data as holotype; 9♂, 1♀, same data as holotype except date collected, 24. vi. 1968; 2♂, 2♀, same data as holotype except date collected, 15. vii. 1968.

The holotype is deposited in the Entomological Institute, Hokkaidō University, Sapporo, Japan.

Biology: Unknown.

Distribution: Nepal.

Remarks: This species can be distinguished from the others by the yellowish ochreous suffusion beneath the labial palpus and the compound eye. In some males the yellowish ochreous suffusion along the termens gives some idea of separating the species. Since there are much similarities externally among the species in this group, the genitalic characters provide most useful characters. In the male, the round subteguminal process, x-shaped dorsal sclerotized thickening of tegumen, two groups of spines at the manica and coarse spines in vesica are characteristics. In the females, the slightly wrinkled ostium and the sclerotized ductus bursae at posterior half are the main characters of this species.

Scirpophaga nepalensis, sp. n.

Holotype ♂. Expanse of wings: 18.0 mm (of the type series 16.5–18.0 mm). Ochreous yellow. Length of labial palpus approximately 3.5 times diameter of compound eye. Forewing ochreous yellow, darker along venations, one fuscous spot at lower angle of cell, R_1 anastomosed with Sc; underside suffused with fuscous. Hindwing pale ochreous white on both surfaces. Frenulum single-bristled.

♀. Expanse of wings: 16.5–18.5 mm. Pale ochreous white. Labial palpus approximately 4.5 times diameter of compound eye. Forewing pale ochreous white with dark fuscous spot at lower angle of cell. Hindwing pale ochreous white on both surfaces. Frenulum single-bristled. Anal tuft ochreous yellow.

Genitalia: Holotype ♂. Uncus relatively broad. Gnathos short, gnathos arms converging gradually. Tegumen with dorsal sclerotized thickening somewhat x-shaped. Subteguminal process spine-like. Manica with two groups of strong spines. Aedeagus slender, vesica with coarse spines.

♀. Ostium bursae broad, membranous, lined with minute spines, section near ductus bursae wrinkled and sclerotized. Ductus bursae lined with sclerotized plates, u-shaped in cross section, at posterior half; anterior half membranous, wrinkled. Ductus seminalis arising at middle of ductus bursae. Corpus bursae rounded, lined internally with minute spines.



Fig. 2. *Scirpophaga kumatai*, sp. nov., ♀ genitalia.

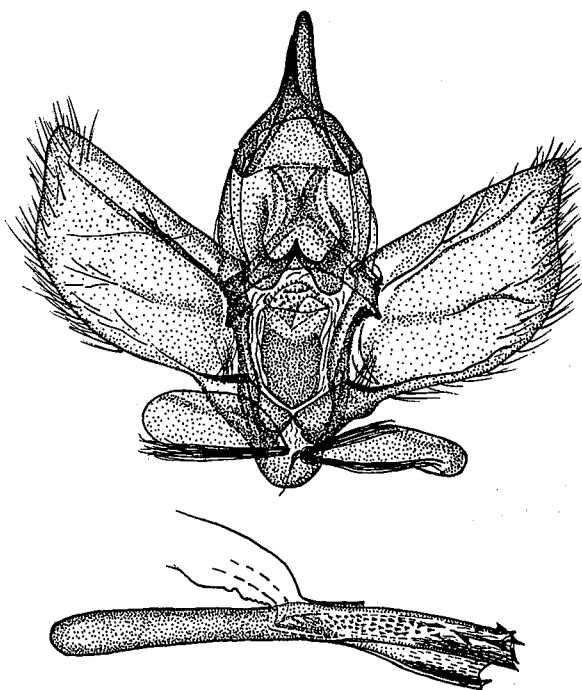


Fig. 3. *Scirpophaga nepalensis*, sp. nov., ♂ genitalia.

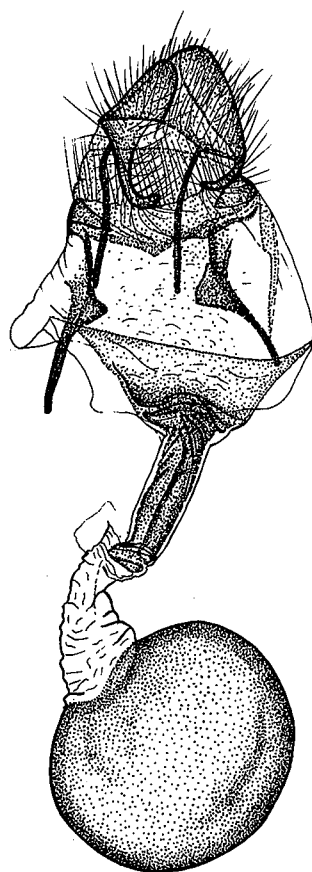


Fig. 4. *Scirpophaga nepalensis*, sp. nov., ♀ genitalia.

Material examined: 3 ♂ & 3 ♀. Holotype ♂: Nepal, Adhabar, Terai Forest, 300 m., 15. vii. 1968, T. Kumata leg., genitalia slide No. Sch-46. Paratypes: 1 ♂, 2 ♀, same data as holotype; 1 ♂, same data as holotype except date collected, 27. vi. 1968; 1 ♀, same data as holotype except date collected, 24. vi. 1968.

The holotype is deposited in the Entomological Institute, Hokkaidō University, Sapporo, Japan.

Biology: Unknown.

Distribution: Nepal.

Remarks: This species is very similar to *S. kumatai* and *S. auristrigella* in general appearance and in which the forewing has a dark fuscous spot. Externally, the males of *S. nepalensis* and *S. auristrigella* can be separated from the male of *S. kumatai* by having yellow scales along venations on forewing. In *S. auristrigella* these yellow scales are also present forming a small band near termen, but this band is absent in *S. nepalensis*. The females of *S. kumatai* and *S. nepalensis* are also very similar. Usually *S. nepalensis* is smaller in size and the scales beneath the labial palpus are not so ochreous yellow as those in *S. kumatai*.

The genitalic structures in both sexes of *S. nepalensis* give good taxonomic characters to distinguish the species. In the male the subteguminal process is spine-like as in *S. magnella*, but the spine in *S. nepalensis* is more slender than that of *S. magnella*. Anyway, *S. magnella* and *S. nepalensis* are quite different externally.

In the female, *S. nepalensis* can be separated from *S. kumatai* by the ostium bursae wrinkled and sclerotized near the ductus bursae. The ductus bursae in *S. nepalensis* is lined with sclerotized plate, and u-shaped in cross section, on the posterior half, while in *S. kumatai* it is lined with sclerotized plate throughout.

Depositories of paratypes

Entomology & Zoology Division, Department of Agriculture, Bangkok, Thailand. *Scirpophaga kumatai*, 1 ♂ & 1 ♀; *S. nepalensis*, 1 ♂ & 1 ♀.

Entomological Institute, Hokkaidô University, Sapporo, Japan. *S. kumatai*, 9 ♂ & 2 ♀; *S. nepalensis*, 1 ♂ & 2 ♀.

British Museum (Natural History), London, England. *S. kumatai*, 1 ♂ & 1 ♀.

Plate I

Fig. 5. *Scirpophaga kumatai*, sp. nov., ♂.

Fig. 6. Ditto, ♀.

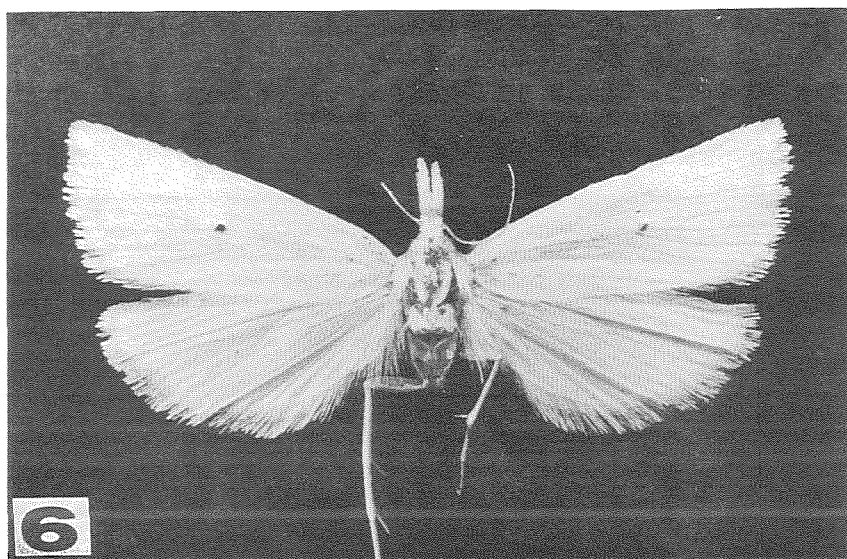
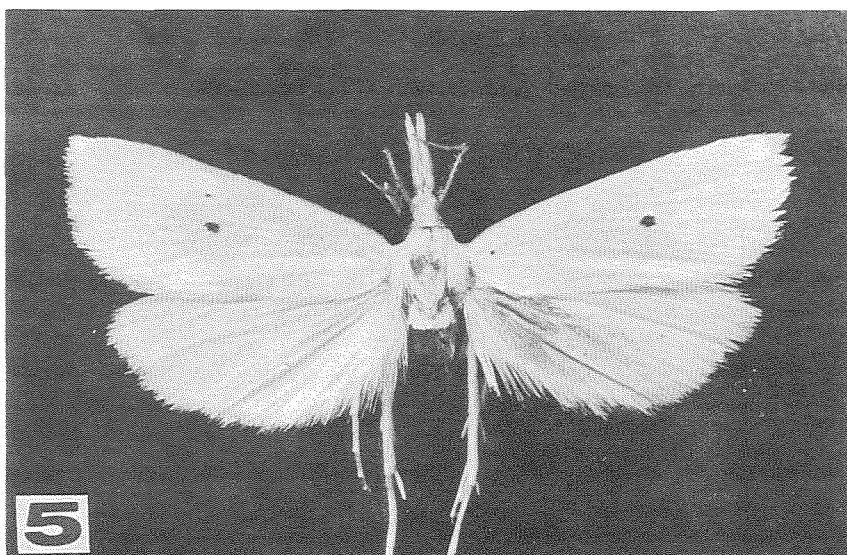


Plate II

Fig. 7. *Scirpophaga nepalensis*, sp. nov., ♂.

Fig. 8. Ditto, ♀.

